ABSTRACT

The condition and ability of an animal to perform to its best ability may be determined by correlating gene expression with clinical and other data. The methods include collecting biological samples and clinical history, generating digital results on gene expression levels in the samples, remotely accessing and comparing the results with information via a communications network. The invention provides methods for assessing a performance animal's condition by determining relative abundance of a target nucleic acid, accessing a remote database, correlating digital signals with information in the database, and reporting the condition of the animal. A diagnostic system comprising a microarray, a microarray reader, a database for storing information from the reader, and a server receiving digital signals from the reader is also disclosed. The reader determines the abundance of target nucleic acid, normalised to a reference nucleic acid, and generates a digital signal that may be displayed as a report.